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(54) SUN-SCREENING COSMETIC

(57)Abstract:
PROBLEM TO BE SOLVED: To provide a sun-screening cosmetic that permits a high-polar ultraviolet absorbent to be stably formulated in high concentration, protects skins from ultraviolet rays, inhibits skin inflammation caused by ultraviolet rays and gives good application feeling.
SOLUTION: This sun-screening cosmetic contains an ester composition prepared by esterification of the following components (1), (2) and (3) and an ultraviolet absorbent: (1) polyhydric alcohol, (2) straight-chain, branched-chain, unsaturated or hydroxy fatty acid of 8-30 carbon atoms, and (3) straight-chain or branched-chain dibasic acid of 12-30 carbon atoms.

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* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

CLAIMS

[Claim(s)]
[Claim 1] The charge of sunscreen makeup characterized by containing the ester compound which esterifies the component of following (1), (2), and (3), and is obtained, and an ultraviolet ray absorbent.
(1) The straight chain or branching dibasic acid [claim 2] of the straight chain of the polyhydric-alcohol (2) carbon numbers 8-30, branching, partial saturation, or the hydroxyfatty acid (3) carbon numbers 12-30 The charge of sunscreen makeup according to claim 1 characterized by said ester compound being an ester compound which esterifies a glycerol, behenic acid, and eicosane diacid, and is obtained.
[Claim 3] The charge of sunscreen makeup according to claim 1 or 2 characterized by said charge of sunscreen makeup being a water-in-oil type emulsification constituent.

[Translation done.]

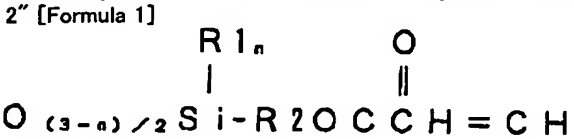
* NOTICES *

DETAILED DESCRIPTION

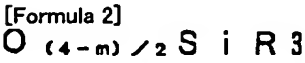
[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to the charge of sunscreen makeup. Furthermore, in detail, by blending a specific ester compound and a specific ultraviolet ray absorbent, the skin is defended from ultraviolet rays, generating of the inflammation of the skin by ultraviolet rays is suppressed, and it is related with the charge of sunscreen makeup which was further excellent in a feeling of an activity.
[0002]
[Description of the Prior Art] There are many people who think that sunburning the skin to brown or light brown color wants to get tanned positively focusing on a young-man layer with the consciousness as the expression of health beauty or a fashion, and they have exposed the skin to the bottom of intense sunrays.
[0003] The consciousness from which the skin is protected from ultraviolet rays increases in recent years, on the other hand, in order to protect the skin from the ultraviolet rays used as causes, such as ******** and erythema, an ultraviolet ray absorbent is blended into the charge of makeup, ultraviolet rays are made to absorb or the charge of sunscreen makeup which blended powder with ultraviolet-rays scattering power is developed.
[0004] However, in order for healthy people to enjoy suitable suntan by sunrays intense for midsummer not to mention a person sensitive to ultraviolet rays, or those who have not exposed the skin to sunrays for a long time, it is necessary to blend an ultraviolet ray absorbent so much into the charge of sunscreen makeup.
[0005]
[Problem(s) to be Solved by the Invention] However, the ultraviolet ray absorbent had the trouble that it became difficult to carry out high combination in the oil content etc. for the polarity.
[0006] As a result of repeating research wholeheartedly that the above-mentioned trouble should be solved, when this invention persons blended the specific ester compound with the charge of sunscreen makeup which blends an ultraviolet ray absorbent, they can do high combination of the polar high ultraviolet ray absorbent at stability, defend the skin from ultraviolet rays, suppress generating of the inflammation of the skin by ultraviolet rays, and came to complete a header and this invention for the charge of sunscreen makeup in which a feeling of an activity was further excellent being obtained.
[0007] This invention can carry out high combination of the polar high ultraviolet ray absorbent at stability, defends the skin from ultraviolet rays, suppresses generating of the inflammation of the skin by ultraviolet rays, and aims at offering the new charge of sunscreen makeup in which a feeling of an activity was excellent compared with the conventional charge of sunscreen makeup.
[0008]
[Means for Solving the Problem] That is, the charge of sunscreen makeup characterized by this invention containing the ester compound which esterifies the component of following (1), (2), and (3), and is obtained, and an ultraviolet ray absorbent is offered.

(1) The straight chain or branching dibasic acid of the straight chain of the polyhydric-alcohol (2) carbon numbers 8-30, branching, partial saturation, or the hydroxyfatty acid (3) carbon numbers 12-30 [0009] Moreover, this invention offers the charge of sunscreen makeup of said ** characterized by said ester compound being an ester compound which esterifies a glycerol, behenic acid, and eicosane diacid, and is obtained.
[0010] Furthermore, this invention is a charge of sunscreen makeup according to claim 1 or 2 characterized by said charge of sunscreen makeup being a water-in-oil type emulsification constituent.
[0011]
[Embodiment of the Invention] Hereafter, the configuration of this invention is explained in full detail.
[0012] The ester compound used for this invention is an ester compound obtained from polyhydric alcohol, the straight chain of carbon numbers 8-30, branching, partial saturation or hydroxyfatty acid, and the straight chain or branching dibasic acid of carbon numbers 12-30, teaches these components at a rate of arbitration, and is obtained by esterifying by the well-known approach. This ester compound has the function which gels a polar high oil, and it becomes possible to blend a polar high ultraviolet ray absorbent with stability by this function.
[0013] As polyhydric alcohol, a glycerol, trimethylol propane, a pen TAERI slit, a glycerol condensate, sorbitol, trimethylolethane, etc. are mentioned, for example.
[0014] As the straight chain, branching, partial saturation, or hydroxyfatty acid of carbon numbers 8-30, a caprylic acid, a lauric acid, a myristic acid, a palmitic acid, stearin acid, behenic acid, a cerotic acid, a montanoic acid, a melissic acid, isostearic acid, oleic acid, 2-ethyl hexanoic acid, 12-hydroxy stearin acid, etc. are mentioned, for example.
[0015] As the straight chain or branching dibasic acid of carbon numbers 12-30, dodecane diacid, eicosane diacid, 1-, 10-deca methylene diacid, 1-, 12-dodeca methylene diacid, 1-, 15-PENTA deca methylene diacid, 1-, 28-OKUTAKOSA methylene diacid, 7-ethyl octadecanedioic acid, etc. are mentioned.
[0016] In this invention, the glycerol behenic acid eicosane dicarboxylic acid of the ester compound which esterifies a glycerol, behenic acid, and eicosane diacid, and is obtained is especially used preferably in respect of usability and stability with the passage of time. Glycerol behenic acid eicosane dicarboxylic acid is obtained in the form of the mixture of various ester compounds where the contents of a glycerol unit, a behenic acid unit, and an eicosane diacid unit differ, by mixing and esterifying a glycerol, behenic acid, and eicosane diacid by the preparation ratio of arbitration.
[0017] The loadings of the ester compound in this invention are 0.5 - 5 % of the weight preferably 0.1 to 20% of the weight among

the charge whole quantity of sunscreen makeup. A problem is in stability [in / in loadings / an elevated temperature], and if 20 % of the weight is exceeded, it will change too much firmly and will be hard coming to use it at less than 0.1 % of the weight.
[0018] Conventionally, the ultraviolet ray absorbent of arbitration currently used widely by the charge of makeup is sufficient as the ultraviolet ray absorbent used for this invention, for example, it can blend the following ultraviolet ray absorbents.
(b) Benzoic-acid system ultraviolet ray absorbent p aminobenzoic acid (it omits Following PABA), PABA mono-glycerol ester, N, and N-dipropoxy PABA ester, N and N-diethoxy PABA ethyl ester, N, and N-dimethyl PABA ethyl ester, N and N-dimethyl PABA butyl ester, N, and N-dimethyl PABA amyl ester, N and N-dimethyl PABA octyl ester (**) -- an anthranilic-acid system ultraviolet ray absorbent gay menthyl-N-acetyl anthranilate (Ha) salicylic-acid system ultraviolet ray absorbent amyl SARISHI rate -- Menthyl salicylate, a gay methyl SARISHI rate, an octyl SARISHI rate, A phenyl SARISHI rate, a benzal SARISHI rate, p-isopropanol phenyl SARISHI rate (d) cinnamic acid system ultraviolet ray absorbent octyl cinnamate, Ethyl-4-isopropyl cinnamate, methyl -2, 5-diisopropyl cinnamate, Ethyl 2, 4-diisopropyl cinnamate, methyl -2, 4-diisopropyl cinnamate, Propyl-p-octyl methoxycinnamate, isopropyl-p-octyl methoxycinnamate, Isoamyl-p-octyl methoxycinnamate, octyl-p-octyl methoxycinnamate (2-ethylhexyl-p-octyl methoxycinnamate), 2-ethoxyethyl-p-octyl methoxycinnamate, cyclohexyl-p-octyl methoxycinnamate, Ethyl-alpha-cyano-beta-phenyl cinnamate, 2-ethoxyethyl-alpha-cyano-beta-phenyl cinnamate, Glyceryl monochrome - The 2-ethyl hexa noil-JIPARA octyl methoxycinnamate (e) benzophenone system ultraviolet ray absorbent 2, 4-dihydroxy benzophenone, 2, 2'-dihydroxy-4-methoxybenzophenone, 2, 2'-dihydroxy -4, a 4'-dimethoxy benzophenone, 2, 2', 4, and 4' -- a - tetra-hydroxy benzophenone and 2-hydroxy-4-methoxybenzophenone -- A 2-hydroxy-4-methoxy-4'-methyl benzophenone and 2-hydroxy-4-methoxybenzophenone-5-sulfonate, 4-phenyl BEZOFENON, 2-ethyl hexyne-4'-phenyl-benzophenone-2-carboxylate, They are siloxanes with 2-hydroxy-4-n-octoxybenzophenone and at least one unit expressed with 4-hydroxy-3-carboxy benzophenone (**) silicone system cinnamic acid derivative ultraviolet ray absorbent following "** 1." The silicone system cinnamic acid derivative by which other units which may exist in said siloxanes are expressed with "** 2" [Formula 1]



[Formula 2]



(In "** 1" and "** 2", the integer of 0-3 and a express the integer of 2 or 3, and, as for R3, the alkyl group of carbon numbers 1-4 or a phenyl group, and m express [the **** hydrogen radical of the bivalence in which the alkyl group of carbon numbers 1-4 or a phenyl group, and R2 have at least two carbon atoms in R1, and n] the integer of 0-3.)
(**) -- other ultraviolet ray absorbent 3-(4' methyl benzylidene)-d and l-camphor -- 3-benzylidene - d, l-camphor, urocanic acid, urocanic acid ethyl ester, 2-phenyl-5-methyl benzo KISAZARU, 2, and 2'-hydroxy-5-methylphenyl benzotriazol, 2-(2'-hydroxy-5'-t-octyl phenyl) benzotriazol, 2-(2'- hydroxy-5'-methylphenyl) benzotriazol, dibenzalazine, dianisoyl methane, 4-methoxy-4'-t-butyl dibenzoylmethane, 5-(3 and 3-dimethyl-2-NORUBORUNIRIDEN)-3-pentane-2-ON [0019] A kind of for example, the above-mentioned ultraviolet ray absorbent or two sorts or more are chosen, and the ultraviolet ray absorbent used for this invention is blended. Especially loadings are not limited, but although it is 0.1 - 20 % of the weight preferably 0.05 to 30% of the weight to the charge of sunscreen makeup, this invention is usually useful, especially when carrying out high combination of the ultraviolet ray absorbent 10% of the weight or more.
[0020] Other components usually used for external preparations, such as cosmetics and drugs, for example, an oil content, a wetting agent, an antioxidant, a surfactant, antiseptics, a moisturizer, amino acid, perfume, water, alcohol, a thickener, a coloring material, powder, drugs, etc. can be suitably blended with the charge of sunscreen makeup of this invention if needed in the range which does not spoil the effectiveness of this invention other than the above-mentioned indispensable component.
[0021] Although the dosage forms of the charge of sunscreen makeup of this invention are arbitrary, when the ester compound of an indispensable component gels a polar high ultraviolet ray absorbent, from the point which becomes possible [blending with stability], and the point of usability, it is desirable that it is a water-in-oil type emulsification constituent, and especially the charge of sunscreen makeup of the gestalt of a cream and a milky lotion is desirable.
[0022]
[Example] Next, although an example is given and this invention is further explained to a detail, thereby, this invention is not limited. Loadings are weight %.
[0023] "Examples 1-6", the "examples 1-3 of a comparison"
From the formula shown in "a table 2", the cream of the examples 1-3 of a comparison of the same formula which does not blend only the examples 1-6 and ester compound which blended the ester compound and ultraviolet ray absorbent of an indispensable component was prepared by the following processes, and the effectiveness trial shown below was performed. The test result was indicated to "a table 3" and "a table 4."
[0024] <Process> 1-7 are mixed and the heating dissolution is carried out, and it keeps at 70 degrees C and considers as the oil phase section. Independently, the heating dissolution of 8-13 is carried out, and it considers as a water phase part. A water phase part is added in this oil phase section, and it fully emulsifies with an emulsifier. After emulsification, it wrote, and when cooling and becoming 35 degrees C or less, becoming precocious, it slushed into the container, it cooled radiationally and hammer hardening and a cream were obtained.
[0025] In addition, the ester compound used for the example is the mixture of the glycerol behenic acid eicosane dicarboxylic acid which esterified a glycerol, behenic acid, and eicosane diacid by the preparation ratio of glycerol:behenic acid:eicosane diacid =10:15:7, and was obtained.
[0026] The evaluation criteria and the valuation basis of an effectiveness trial are as follows.
<stability assessment trial> each cream -- a thermostat (-10 degrees C, 0 degree C, 25 degrees C, and 40 degrees C) -- three months -- saving -- a color tone, a smell, and an appearance -- the following criteria estimated change of description and a feeling of an activity.
[Valuation basis]
O : -- a color tone, a smell, and an appearance -- there is no change in both description and a feeling of an activity.

x: — a color tone, a smell, and an appearance — change was looked at by either description and the feeling of an activity.
[0027] Ten <organic-functions assessment trial of usability> panelists were made to use each cream, and the following criteria estimated substance, smoothness, and stickiness gently.
[A table 1]
[An evaluating point]
---------- Usability It is. It is a little. There is nothing. ----------
---------- Gently 2 1 0 substance 2 1 0 smoothness 2 1 Sticky zero 0 1 2 ----------
---------- [Valuation basis]
O : less than an average of 0.5 point evaluating [an average of 1.5 or more evaluating point **:evaluating point / or more an average of 0.5 / less than 1.5 / x:] [0028] The satisfactory example 1 of a comparison was used for the example 6 by which high combination of the ultraviolet ray absorbent is carried out at stability, and stability in the <ultraviolet absorption effectiveness> example, and the real activity test in the seashore was performed. After the test method divided ten panelists' back half-and-half, carried out optimum dose spreading of the cream of an example 6 at one side and has already carried out tales-doses spreading of the cream of the example 1 of a comparison at one of the two, it was exposed outdoors to the sun for 6 hours, and evaluated extent of suntan in accordance with the following criteria.
O : a suntan symptom was hardly accepted.
**: The slight suntan symptom was accepted.
x: The strong suntan symptom was accepted.
[0029]
[A table 2]

	実施例						比較例		
	1	2	3	4	5	6	1	2	3
1）流動パラフィン	10	10	10	—	—	—	10	—	10
2）スクワラン	—	—	—	10	10	10	—	10	—
3）オクタメチルシクロテトラシロキサン	5	5	5	5	5	5	5	5	5
4）エステル化合物＊	2	5	10	2	5	10	—	—	—
5）ジイソステアリン酸ポリステアリル	2	2	2	2	2	2	2	2	2
6）4-メトキシ-4'-t-ブチルジベンゾイルメタン	1	1	1	1	1	1	1	1	1
7）オクチルメトキシシンナメート	5	10	15	5	10	15	2	5	10
8）ポリエチレングリコール 6000	3	3	3	3	3	3	3	3	3
9）1,3-ブチレングリコール	7	7	7	7	7	7	7	7	7
10）グリセリン	5	5	5	5	5	5	5	5	5
11）防腐剤	適量	適量	適量	適量	適量	適量	適量	適量	適量
12）香料	適量	適量	適量	適量	適量	適量	適量	適量	適量
13）イオン交換水	残量	残量	残量	残量	残量	残量	残量	残量	残量

＊）グリセリンペヘン酸エイコサンジカルボン酸エステル

[0030]
[A table 3]

		実施例						比較例		
		1	2	3	4	5	6	1	2	3
安定性		○	○	○	○	○	○	○	×	×
使用性	しっとりさ	○	○	○	○	○	○	○	△	△
	こく	○	○	○	○	○	○	△	△	×
	なめらかさ	○	○	○	○	○	○	○	△	×
	べたつき	○	○	○	○	○	○	○	△	△

[0031]
[A table 4]

日焼け止め評価	実施例6	比較例1
○	8	0
△	2	1
×	0	9

[0032] "A table 3" and "a table 4" show that the cream of the example which is the charge of sunscreen makeup of this invention is extremely excellent in respect of stability, usability, and the ultraviolet absorption effectiveness compared with the cream of the example of a comparison.
[0033]
[Effect of the Invention] According to this invention, the high combination of the polar high ultraviolet ray absorbent can be carried out at stability, the skin is defended from ultraviolet rays, generating of the inflammation of the skin by ultraviolet rays is suppressed, and the charge of sunscreen makeup excellent in a feeling of an activity can be offered.

[Translation done.]